Developing Spanish Child Language—The Syntax of Pronominal Case

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By

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Abstract

The "Dual Mechanism" model of language processing posits that many word combinations are stored in memory while others are generated by freely combining syntax. The "Default Case" hypothesis holds that languages have "default" pronominal cases, which are used when the syntactic context lacks the specificity necessary to assign noun phrases particular case marking. Child English and German speakers make case errors which support these theories, in subject and object position, respectively. In this study, we explore the object of the preposition position in child Spanish to determine whether children produce default case errors. The fact that prepositions constitute a highly frequent, closed class element, as do pronouns, makes it seem plausible that children could simply memorize preposition + oblique case object sequences, without using freely combining syntax. To explore this problem two studies were carried out, both using existing data. The first search was a detailed search of all pronominal forms in two specific children which looked for any errors that children might make with oblique case in pronouns. The second search culled all preposition-nominative case pronoun combinations in 13 Spanish corpora, as this is the error predicted by the "Default Case" hypothesis. From the first, detailed search, specific default case errors were found in the pronoun *para*. However, these errors are most likely due to transfer from contact languages, including English and Catalan, with monolingual children producing no errors. From the second search, out of all of the errors made in child speech, there was not a substantial number of errors attributable to default case. While there is evidence that default case can emerge in other child languages, the high frequency and the fact that the preposition and pronouns are closed-class elements suggests that children are memorizing chunks and probably not using syntax in the constructions under consideration here.

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Chapter 1: Introduction

It is known that child English speakers sometimes produce errors such as “Him watching TV.” instead of “He is watching TV.” This is an example of children using pronouns in accusative case in subject position. Since subject position calls for a nominative pronoun, this is an error. We want to know what causes there peculiar case alternations in child language. There have been studies that have shown that child English (Schütze and Wexler, 1996) and German (Berger-Morales, 2005) speakers produce these case errors, so we examined child Spanish to see whether similar phenomena could be detected. After adapting Schütze’s (1997) tests for default case in English, we could see that the default case in Spanish is nominative.

1. ¿Quien hizo eso?—Yo/*Mi. *Who did this? I/*Me.*
2. Yo/*mi también. *I/*me too.*

Since subjects are in nominative case already, the errors would not show up in subject position. In direct object position, Spanish uses phonological clitics, such as *lo, la , me, te,* which would also not allow for the nominative default case to appear. However, in object of preposition position, the pronouns occur in oblique case which means that nominative pronouns in this position would be detectable.

In order to check for these errors, we will be looking at spontaneous production data for child Spanish. The first study will be performed by taking an in-depth look at two children from the CHILDES Database (MacWhinney, 2008). We will search all pronouns that these children produce and record the position where they occur and any errors found. The second, more general study that will be done is of eleven other eligible children from the CHILDES Database. We will look only where we expect to find errors according to our data from study one to see if these children produce any case errors.

Chapter 2: Background and Literature Review

Section 2.1: Dual Mechanism

The Dual Mechanism Model, according to Marcus (1992), says that the mind has two mechanisms for producing language. The first mechanism is syntax, or rules used in expressing language. An example of this is the rules for making verbs past tense. There are regular verbs that are made into past tense by adding –ed to a verb to make it past tense (walk→ walked). These constructions do not need to be memorized because they follow a pattern for all regular verbs in English.

The second mechanism proposed is that there are memorized chunks in the lexicon. An example of this is the presence of irregular past tense verbs in English. For example, the verb 'eat' does not use the regular –ed ending and become 'eated'. Instead, eat is an example of an irregular verb that becomes 'ate' in the past tense. So, if this does not follow a pattern and is not part of syntax, then what is it? Clahsen argues that forms like this are memorized, or stored associatively in memory.

In Bartke, Marcus, and Clahsen (1995), they show that children have the ability to not only use words that are part of their input (i.e. high frequency words used by parents), but that children also can apply default inflectional rules. This article starts by acknowledging the importance of frequency in children's speech, but also arguing the importance of another *mechanism:* inflectional morphology.

The first example for frequency is irregular verbs. Whether irregular verbs such as *sing-sang* become overregularized depends upon frequency. For example, a lower frequency verb such as *stride* tends to become the overregularized *strided* instead of *strode.* However, higher frequency verbs such as *see-saw* or *go-went* are much less likely to be overregularized.

This simple matter of frequency, however, may not hold true for how to properly treat regular verbs. There is an argument that generalizations of regular and irregular verbs are produced by different mechanisms. This is hard to tell in English because most of the verbs use the regular past tense form, so a more complex inflectional system is needed to draw a better conclusion.

Bartke, Marcus, and Clahsen chose to test German inflection because the language has a very complicated plural system. In German, the least frequent plural ending *–s* is the default ending for uncommon or strange sounding words. So, if this ending is rarely used (less than 10% of all types and tokens), how do children learn that it is the default plural ending?

Three studies (Mugdan, 1977; MacWhinney 1978; Scholer & Kany 1989) of how children inflect novel words all suggest that kids characteristically use *–e* or *–en* to inflect novel words. All children use these irregular plural forms more than the default plural form *–s*. However, these studies use nonsense words with suffixes that require certain endings, they present words as roots and not in context which could call for the default case, and many of the novel words used rhymed with already existing irregular nouns. These three studies allowed the children to use analogy when deciding what plural ending to use.

For this reason, Bartke, Marcus, and Clahsen invented a study that would test how children would generalize default inflection—similar to adults or in some other way. Two groups of nonsense words were used, one group that rhymed with existing nouns in German, allowing for analogy, and another group that did not rhyme with any existing German nouns. They found that children used *–s* significantly more with the roots that did not rhyme. Children also used the default *–s* with names as adults do. This evidence proves that children do not simply rely on frequency of input to determine their output, but also use default inflection. In this

study, we want to know whether the use of prepositions + pronouns, like 'para mi' (for me) in child language is a function of productive syntax or a function of simply memorized chunks stored in the lexicon.

Section 2.2: Lexical Elements larger than words

Many linguists have tried to exclude phrases or fixed sayings that are larger than just single-word nouns, verbs, adjectives, etc. from the lexicon. Some argue that these constructions, such as quotes, poems, idioms, and clichés exist in another more general part of the memory. But with all of the different categories of phrases, this material is hardly insignificant and makes up a sizeable portion of our vocabulary.

Jackendoff (1997) lists many parallels between idioms and compounds that suggest they can be treated as compounds in a lexical sense. Some idioms, such as "kick the bucket" cannot undergo any movement or syntactic transformation and still make sense. For example, according to Jackendoff, neither 18a nor 18b can have meanings similar to the meaning associated with their corresponding idioms:

(18) a. # The bucket was kicked by John.

b. # The towel was thrown in by Bill.

Other idioms, such as "draw the line", can be changed syntactically and still be considered correct. To address this issue, Jackendoff proposes a theory that accepts "items larger than Xº" as being able to license syntactic structures, and in turn, allows idioms, clichés, and other larger lexical elements to be a part of the lexicon. In Jackendoff (2002), the definition of an Xº is given as a corresponding notion to a lexical item in that an Xº (lexical) category is something such as a noun, verb, adjective or preposition. For example, *above* is a preposition and therefore an Xº item. The word *love* can be a noun or a verb depending on the context and

would also be considered an Xº element. In Jackendoff's proposed theory of accepting items larger than Xº, these larger lexical items are quotes and idioms such as 'gimme a break' or 'I cried my eyes out'.

If language can include large constructional idioms of the "kick the bucket" variety, then it would not seem far-fetched that 'para ti' and 'para mi' could also be memorized forms. Further plausibility for this argument comes from the fact that Spanish actually has lexicalized one word versions of preposition + pronoun combinations including *contigo* "with you" and *conmigo* "with me". Given these facts, children, and possibly adults, could do the same with *para mí* and *para ti*.

Section 2.3: Case

According to one linguistics textbook, case is a "morphosyntactic property of noun phrases", and its essential function is to identify the function of a noun phrase or its "grammatical relation in the sentence" (Santorini, B., and Kroch, A., 2007, ch. 8). Theories of case marking (e.g. Chomsky 1981) attempt to account for the co-occurrence of grammatical case markers on nouns and "case assigners". Case assigners include prepositions for oblique case nouns and pronouns (e.g. <u>for</u> **him**), verbs for accusative case nouns and pronouns (He <u>hugg</u>ed **him**.) and verb inflection for nominative case nouns and pronouns (**He** <u>hugged</u> him.).

Child English speakers sometimes use pronouns in accusative case in subject position, as in 1 and 2. This contrasts with the adult-like sentence in 3, which uses a nominative case pronoun (cf. Schütze 1997).

1. Him stand on chairs.

2. Her watching TV.

3. She is watching TV.

In 1997, Schütze proposed a theory for a default case in grammar which claims that these errors are not random, but rather that they follow two principles of adult English. First, all nouns have to be case-marked, whether overtly, as in Russian, German and other languages, or covertly, as in English and Spanish (cf. Chomsky 1981). English and Spanish only show overt case marking on pronouns. Second, for English, the default case is accusative, which is fairly easy to assess. For example, in English "Me too" is correct versus the incorrect "*I too." This default case shows up when there is nothing to assign case to the noun phrase which is shown in the following examples from Schütze's dissertation (1997, p. 53).

4. Who did this? –Me./*I.
5. Her/*She in New York is what we have to avoid.
6. Me/*I too. Me/*I neither. Me/*I next!
7. It was us/*we.

Studies have shown that in child language, children make frequent case errors. One unique point about English is that non-nominative subjects appear frequently in the language, while other languages do not seem to have the same results with non-NOM subjects. In studies done of Dutch, German, Russian, and Faroese, the amount of non-NOM subjects that children produce is almost none. Schütze argues that this stems from the fact that the default case in these languages is nominative instead of accusative, as in English (Schütze and Wexler, 1996). In a study of case errors in German, in which the default case is nominative, Berger-Morales (2005) found that direct objects in child German are marked with nominative case approximately 5% of the time, while subjects are accusative less than 1% of the time. This

error rate is much lower than in child English, but supports the default case theory. Constructions such as the following (adapting the tests given for English in Schütze, 1997) provide evidence that nominative is the default case in Spanish:

8. ¿Quien hizo eso?—Yo/*Mi. *Who did this? I/*Me.*

9. Tú/*ti en Nueva York es lo que tenemos que evitar. *You-nom/*you-acc in New York is what we have to avoid.*

10. Yo/*mi también. *I/*me too.*

11. Fui yo/*mi. *It was I/*me.*

From this data, it can be concluded that the default case in Spanish is nominative instead of accusative, as in English. With this suggestion of a nominative default case in Spanish established, there are certain parts of speech called case assigners that assign a particular case in sentences. Chomsky (1981) proposes the idea of case assignment in grammar. For example, inflection assigns the nominative case to subject position. Also, verbs assign the accusative case to direct objects. More relevantly to this study, prepositions assign the oblique case to objects of prepositions. Now I turn to the ways in which Case Theory has been investigated in child language.

Schütze argues, following Chomsky (1981), that the case on subject pronouns depends on whether verbs are finite (He runs.) or nonfinite (For him to run would be a good idea.). When verbs are finite, nominative appears and when they are nonfinite accusative appears. For children learning a language, they do not automatically have inflection; instead children gradually develop inflection. This observation is sometimes referred to as the "Optional

Infinitive" (OI) stage. In Schütze, & Wexler (1996), this gradual development of inflection is examined in detail. First, there is an argument that the default case in a child's grammar only appears in OI utterances with subjects in the default case. Schütze and Wexler (1996) explain two reasons why this is inaccurate. First, if children understand that the accusative form is the default, then this does not explain why optional infinitives frequently have nominative subjects. Second, it claims that the child is simply confused about the genitive and possessive forms, by predicting that all of the non-NOM forms for subjects would be the same for all children, even if a child used the incorrect default case. Schütze and Wexler argue that tense and agreement have independent consequences for subject case. They claim that when inflection is either present or absent, the difference for a child in the OI stage is one of syntax, showing that children make errors but still truly understand case. The stage of optional infinitives is renamed extended optional infinitive (EOI) for those children with SLI, due to the longer period that they are in the OI stage (Wexler, Schütze and Rice, 1998). They conclude that for children with SLI, the reason case and inflection develop in certain ways is due to the same phenomenon, which is the "optionality of the Infl components Agr (agreement) and Tns (tense) in immature grammars" (Wexler, Schütze, and Rice, 1998, pg. 341).

From children's gradual development of inflection, they also, consequently, develop the ability to assign nominative case to subjects. As stated earlier, English is not a default nominative case language, but instead it is a default accusative case language. This means that accusatives show up in subject positions when inflection is not sufficiently developed so as to assign nominative case to the subject. Spanish is a default nominative language so the problems are not hypothesized to appear in subject position. However, a default case language

like Spanish could show errors in position other than subject. These errors are not likely to show up in direct object position because objects receive accusative case, but also frequently occur as phonological clitics, and possibly nominals of other grammatical categories (e.g. Cardinaletti & Starke, 1996, Dechaine & Wiltschko, 2002) which may not have obvious nominative forms. But, it is very possible that these case errors may show up in children's speech as the object of a preposition, which seem to take standard strong pronominal forms.

Section 2.4: Research Question

The first question to be addressed is whether children make pronominal case errors in the object of a preposition position. If they do, the second question is whether these errors are consistent with the Default Case Theory of Schütze & Wexler (1996). Alternatively, and more speculatively, if children make no case errors in this position, what would account for the lack of errors? Could it be that children are forming lexical chunks out of the two closed class elements or are they using freely combining syntax?

Chapter 3: Study 1- All Pronouns Case Studies

Section 3.1: Participants

The participants in this study are from the CHILDES Database—an electronic repository of language acquisition data (MacWhinney, 2000). CHILDES stands for Child Language Data Exchange System and contains 130 corpora of children acquiring many different languages. On the CHILDES website, there is a database with downloadable transcripts for each child. All of the children in this study are Spanish-speaking and therefore can be found under the zipped transcript labeled *Romance*, which contains all of the data from romance languages.

The first participant in this study is a female child named Koki from the Montes corpus, who is talking with her mother Rosa and father Jim in recorded files from the CHILDES database. When these files started on July 21, 1980, Koki was 1 year, 7 months, and 20 days old. The last file ends on November 15, 1981 when Koki was 2 years, 11 months, and 14 days old. Their location is Patzcuaro, Michoacán in México and the recording was done in the Montes household. There were 13 recording sessions total and they were taped every one to two months during this sixteen month period (Montes, R.G., 1992).

The second participant in this study is María from the Lopez-Ornat corpus, who is an only child speaking with her parents in the home during play, bath, or feeding time. These files began in 1988 when María was 1 year and 7 months old and they stopped in 1991 when she was 4 years old. (Lopez Ornat, 1994). This family's location is Madrid, Spain and the recording took place every two weeks in 30 minute sessions during this 2 year and 5 month period.

Section 3.2: Procedures

This study was carried out using CLAN, the computational tools provided by the CHILDES project. This program was made particularly for analyzing transcribed data in the CHILDES format. According the CLAN manual, it "allows you to perform a large number of automatic analyses on transcript data. The analyses include frequency counts, word searches, co-occurrence analyses, MLU counts, interactional analyses, text changes, and morphosyntactic analysis" (MacWhinney, 2000, p.7). CLAN provides the tools needed to perform very specific searches in the transcripts instead of just visually inspecting them.

In this study, 'kwal' searches (e.g. kwal +t*CHI +slas –w2 *.cha) were performed for both the Montes corpus and the Lopez-Ornat corpus, which searched for all the pronouns that these children produced to determine whether any of them were produced with incorrect case marking. All song lyrics and repetitions (of parents) were excluded. More specifically, we examined whether pronouns that occurred with prepositions were in nominative case (which would mean that an error was made) or not.

Twenty-two pronouns were searched, including nominative pronouns (Yo, tú, ella, etc.), reflexive pronouns (me, te, etc.), prepositional/oblique case pronouns (mi, ti, etc.), and direct/indirect object pronouns (le, nos, me, te, etc.). In both corpora, every pronoun that was found was examined in context, with the previous and following sentence included in the inspection to assure that each pronoun was assigned to the correct category. The pronouns were split into three categories—subject position, object of verb position, and object of preposition position. This allowed for a clear view of where errors show up in speech, and since in Spanish, subjects are already in nominative case and objects of verbs show up as phonological clitics, we expected to see possible case errors in object of preposition position.

In the Montes corpus only (because it was the only one in which errors were found), three frequently-used prepositions were chosen to be examined. These three were *por*, *para*, and *de*. A specific search was performed that found every *por*, *para*, and *de* preposition present in each of the files. After that, each preposition found was documented on the basis of specific criteria. The first step was to record the number of each preposition found in the files. The second step was to record how many of those prepositions were found before a pronoun. After that, the number of case errors found after each preposition was also recorded.

Section 3.3: Results and Discussion

Montes

In the Montes data, the total number of utterances spoken by the child Koki was 4303, and the total for adults was 4388. The pronoun frequency and errors from the data are as follows:

		Subject position	Errors	Object of verb	Errors	Object of preposition	Errors
Yo		103	0	0	0	1	0
Tú		16	0	0	0	7	6
Él		13	0	0	0	5	0
Ella		1	0	0	0	0	0
Nosotros		1	0	0	0	0	0
Nosotras		0	0	0	0	0	0
Vosotros		0	0	0	0	0	0
Usted		0	0	0	0	0	0
Ustedes		0	0	0	0	0	0
Ellos		6	0	0	0	0	0
Ellas		0	0	0	0	0	0
Mí		3	0	1	0	21	0
Tí		0	0	0	0	2	0
Vosotras		0	0	0	0	0	0
Me		0	0	16	0	0	0
Te		0	0	7	0	0	0
Nos		0	0	0	0	0	0
Os		0	0	0	0	0	0
Lo		0	0	48	0	0	0
La		0	0	8	0	0	0
Los		0	0	17	0	0	0
Las		0	0	5	0	0	0

Table 1.1: Occurrences of pronouns and errors arranged by position

In the Montes corpus, Koki used each examined preposition several times. The preposition *de* was used 110 times. However, it was used only 6 times with a pronoun and there were no errors made by Koki when using *de*. *Para* was spoken 50 times overall. Out of those 50, 28 times were used with a pronoun. There were six case errors out of the 28 occurrences with pronouns. The preposition *por* was found only 19 times throughout the files, and there were no occurrences with pronouns and therefore zero errors.

Prepositions	**de**	**para**	**por**
# of times used	110	50	19
Occurrences with a pronoun	6	28	0
Errors of case when found with pronoun	0	6	0

Table 1.2— Overall Usage of Prepositions with Case Errors

Out of all three prepositions, the only case errors produced were with *para*. An error with the preposition *para* occurred six times with a pronoun. All six errors were in 2nd person singular position. In other words, "para tú" was said instead of "para ti". The distribution with particular pronouns can be seen in Table 1.3.

Pronouns	**Occurrences with particular pronoun**	**Percentages %**
Mi	20	71.43
Yo (error)	0	0
Ti	2	7.14
Tú (error)	6	21.43

Table 1.3—Number and Percent of Pronominal Forms used with *Para*

Overall, the child's rate of error was 21.43% of the time when the pronoun *para* occurred. When we examined the error rate overall taking all pronouns into account, the error

rate for subject pronouns was 0%. The error rate for direct object pronouns was also 0%, while the object of preposition error rate was 17.64% as seen in Table 1.4.

	Subject	Direct Object	Object of Preposition
Number of Pronouns	143	102	34
Number and Percentage (%) of Errors	0 (0%)	0 (0%)	6 (17.64%)

Table 1.4—Pronouns and Errors According to Position

The six specific errors made were in several different sessions from May 1981 to August 1981.

Error # 1-June 1981, line 914:

**CHI: # toma.*

**MOT: gracias [>].*

**CHI: <&u> [/] [<] # una para tú.* (ERROR)

Error # 3- July 1981, line 389:

**MOT: #3_2 para mí?*

**CHI: ése es para tú.* (ERROR)

**MOT: ay gracias!*

Error # 4- July 1981, line 395:

**MOT: #6_3 mm, bien tiernito!*

**CHI: me lo dio Isabel para tú y éste para mí.* (ERROR)

**MOT: los dos son para usted Pipi.*

Error # 5- July 1981, line 458:

**MOT: #3_4 coma~lo que Isabel se los hizo a los dos para usted.*

**CHI: #2 y para tú?* (ERROR)

**MOT: para mí no mi amor porque para mí me va a hacer un poquitito de café.*

Error #6-August 1981, line 587:

**MOT: los pone acá.*

**CHI: son para tú.* (ERROR)

Error #7-August 1981, line 762:

MOT: guarde~las para poder jugar,, sabe?

**CHI: para [//] tú ya &n [//] # tienes?* (ERROR)

Lopez-Ornat

In the Lopez-Ornat data, the total number of utterances spoken by the child María was 9575, and the total number of utterances spoken by the parents combined was 11,187. No errors were found in any position. The distribution of pronouns according to position and the errors are as follows:

		Subject position	Errors	Object of verb	Errors	Object of preposition	Errors
Yo		88	0	0	0	0	0
Tú		87	0	0	0	0	0
Él		4	0	0	0	4	0
Ella		1	0	0	0	0	0
Nosotros		0	0	0	0	0	0
Nosotras		0	0	0	0	0	0
Vosotros		0	0	0	0	0	0
Usted		1	0	0	0	0	0
Ustedes		0	0	0	0	0	0
Ellos		1	0	0	0	0	0
Ellas		0	0	0	0	0	0
Mí		0	0	0	0	26	0
Tí		0	0	0	0	36	0
Vosotras		0	0	0	0	0	0
Me		0	0	15	0	0	0
Te		0	0	10	0	0	0
Nos		0	0	0	0	0	0
Os		0	0	0	0	0	0
Lo		0	0	66	0	0	0
La		0	0	0	0	0	0
Los		0	0	11	0	0	0
Las		0	0	10	0	0	0

Table 1.5: Occurrences of pronouns and errors arranged by position

To compare with the Montes data, the occurrences of particular pronouns with *para* can be seen in Table 1.6.

Pronouns	**Occurrences with particular pronoun**	**Percentages %**
Mi	7	29.17
Yo (error)	0	0
Ti	17	70.83
Tú (error)	0	0

Table 1.6—Number and Percent of Pronominal Forms used with *Para*

When the overall error rate was examined taking all pronouns into account, the error rate for subject pronouns, direct object pronouns and object of preposition pronouns were all 0% as seen in Table 1.7.

	Subject	**Direct Object**	**Object of Preposition**
Number of Pronouns	182	112	66
Number and Percentage (%) of Errors	0 (0%)	0 (0%)	0 (0%)

Table 1.7—Pronouns and Errors according to position

The lack of any errors present in this corpus, while in the Montes corpus the child produced several errors, called for another look at more child language data (which was done in study #2) and also a closer look at the background of each child to find the underlying cause of why one produced errors and the other did not.

Chapter 4: Study 2- Prepositional Objects Only

Section 4.1: Participants

In addition to the two children examined in study one, eleven other Spanish corpora from the CHILDES Database (MacWhinney, 2000) that met the age criteria of under four years of age (when children from other languages are still likely to make case errors) were examined by just looking at specific preposition plus pronoun combinations where errors were found in the previous case studies. The corpora used with respective age ranges are as follows:

1. Aguirre—1;11-2;11
2. Diez Itza—3;0-3;11
3. Irene—0;11-3;2
4. Jackson Thal—0;10-3;0
5. Linaza—2;0-4;0
6. Marrero—1;6-8;0
7. Orea Pine—1;10-2;7
8. Romero—2;0
9. Serra Sole—1;4-3;10
10. Vila—0;11-4;8
11. Yasmin—1;10-2;9

Section 4.2: Procedures

For each corpus included in this study, I conducted six 'combo' searches for oblique case plus pronoun where we thought it probable (according to our previous data) that we could find case errors. For example, the 'combo' search (e.g. combo +t*CHI +s"para^tú" *.cha) from CLAN made it possible to look for likely preposition + pronoun combination to see if these children made the same type of case error as Koki in the Montes data. Six specific 'combo'

searches were conducted in this study which included ‘para yo, para tú, por yo, por tú, de yo, de tú’. The search in each corpus looked to see if a child produced any one of these mistakes. After looking for possible errors, we then conducted a ‘combo’ search to see how many times the prepositions occurred with grammatical pronouns. The six combinations in this search were ‘para mi, para ti, por mi, por ti, de mi, de ti’. Each corpus was then examined using a ‘frequency’ search (e.g. freq + t*CHI +spara *.cha) that allowed us to see how many times a specific word was produced. Using ‘frequency’, we looked at each preposition (para, por, de) to see how many times it occurred for each corpus, which gave us a control for relevancy.

Section 4.3: Results and Discussion

After conducting the six ‘combo’ searches for each corpus, only two total errors were found. One child named Vila produced one “para tú” and one “de tú” while the rest of the children produced no preposition plus ungrammatical pronoun sequences. This information can be seen in Table 2.1

NAME		Para "tú"	Para "yo"	Por "tú"	Por"yo"	De "tú"	De "yo"
Aguirre		0	0	0	0	0	0
Diez Itza		0	0	0	0	0	0
Irene		0	0	0	0	0	0
Jackson Thal		0	0	0	0	0	0
Linaza		0	0	0	0	0	0
Marrero		0	0	0	0	0	0
Orea Pine		0	0	0	0	0	0
Romero		0	0	0	0	0	0
Serra Sole		0	0	0	0	0	0
Vila		1	0	0	0	1	0
Yasmin		0	0	0	0	0	0
TOTAL		1	0	0	0	1	0

Table 2.1- Errors according to Corpus

Out of the 4435 total pronouns produced in these 11 corpora, 98 occurred with prepositions *de, por, or para.* Of these 98 combinations, there were only two errors which means that an error was produced approximately two percent of the time that a preposition plus pronoun sequence was spoken. The two errors were both from the Vila Corpus. All other preposition plus pronoun combinations that were produced by the children in this second study contained no possible case errors. The breakdown of pronouns used and the number of prepositions plus grammatical pronouns is shown in Table 2.2.

NAME		**Para**	Para + grammatical pronoun	Nom. Case Errors for "para"	**Por**	Por + Grammatical Pronoun	Nom. Case Errors for "por"	**De**	De + Grammatical Pronoun	Nom. Case Errors for "De"
Aguirre		147	14	0	125	0	0	103	1	0
Diez Itza		58	4	0	172	0	0	629	0	0
Irene		209	5	0	128	2	0	725	2	0
Jackson Thal		129	9	0	41	0	0	132	1	0
Linaza		17	4	0	8	0	0	67	0	0
Marrero		101	9	0	84	0	0	222	0	0
Orea Pine		282	37	0	153	0	0	580	0	0
Romero		0	0	0	1	0	0	2	0	0
Serra Sole		7	0	0	3	0	0	15	0	0
Vila		34	10	1	30	0	0	161	0	1
Yasmin		21	0	0	7	0	0	42	0	0
TOTAL		1005	92	1	752	2	0	2678	4	1

Table 2.2: Frequency of Preposition and Errors by Corpus

Vila

Vila is a Spanish-speaking boy named Emilio who was recorded from 0;11 to 4;8. The work from his recordings was done in Spain at the University of Barcelona. In the Vila corpus, the two errors found were also with the preposition *para* like Koki in the Montes corpus. Vila produced one “para tú’ error and one “de tú” error in his speech. Both errors

occurred in the same recording session when Vila was 2 years and 8 months old. Emilio, who in the transcripts is *CHI was talking with another child, represented as *CEC, and also the observer *NAC and his mother *INE during session 25 when the first error, 'para tú' was made (line 1058):

Error #1- Session 25, line 1058:

**CEC: ahora me la tiras a mí Emilito.*

**NAC: té.*

**CHI: no. [+ sn]*

**CHI: para tú aquella.* *(ERROR)*

**CEC: mama preparame la merienda.*

Error #2- Session 25, line 1438:

**NAC: me lo como?*

**CHI: sí. [+ sn]*

**NAC: seguro?*

**CHI: sí. [+ sn]*

**CHI: hay un poquito de tú aquí. [+ o]* *(ERROR)*

From visual inspection of his transcripts, we were able to see that his mother not only spoke to him in Spanish, but also in Catalan. Catalan is similar to Spanish in many ways; however, it allows nominative tú pronouns to occur in the object of preposition position. This means that an utterance such as "para ti" in Catalan is said "per a tu" and the child very likely heard the word "tú" used in object of preposition position.

Chapter 5: Discussion

The first research question, whether or not children make default case errors in Spanish, can be answered by looking at the data from both study one and two. When we performed study one with the Montes data, it appeared that this child was producing case errors. However, after our second in-depth case study of the Lopez-Ornat data where we found no errors, further examination was needed. In our second, more general study of 11 Spanish corpora, we found that there was only one child who produced these errors. Looking at this child, Vila, and the Montes data, we could see that these children had input from other languages— English for Montes and Catalan for Vila. We speculate that transfer is the reason for these errors. To answer the second question, because children do not seem to make errors consistent with Default Case Theory in the object of preposition position, we argue that these errors are probably memorized forms. This shows in our research because of the lack of default case errors in monolingual Spanish-speaking children. The rate of errors for pronouns in object of preposition position is 0% for these children, which is unnaturally low compared to other languages. This supports the argument that Spanish-speaking children are memorizing these 'para mi' and para ti' type sequences as lexical chunks.

In this study, the Lopez-Ornat data from the in-depth case study serves as a basic, representative monolingual Spanish speaker with no known outside influence from other languages. As previously shown, there were no errors (or possible case errors) made by this child found in the data. This evidence was corroborated by searching the CHILDES database for all other eligible Spanish-speaking children, which totaled 11, and searching for any errors in those databases. Only one corpus, Vila, contained errors, and the rest showed no errors. Montes, the other in-depth case study did show errors 17.64 % of the time in object of

preposition position. In looking at the background of this child's language acquisition, it was found that this child not only received input from a native Spanish-speaker (her mother), but that she received input from her father who is a native English-speaker that was learning Spanish and spoke to the child most of the time in Spanish. Since the parents talked to each other mostly in English and to Koki mostly in Spanish, it is likely that she not only heard both languages, but also heard mistakes being made in Spanish when her father spoke to her, which could account for her errors. This is due to the fact that nominative (You left.) and oblique case pronouns (This is for you.) neutralize in English. Overall, we suspect that these errors can be attributed to transfer from English. In the case of Vila, this child was also exposed to another language. His mother also spoke to him in Catalan which we were able to see by visually inspecting the transcripts. In Catalan, oblique and nominative cases are neutralized in object of preposition position. For example, in Catalan para ti= per a tu, so this child's errors could also be argued as a case of transfer from another language.

In conclusion, default case does not seem to determine children's behavior with pronominal objects of prepositions as monolingual Spanish-speaking children are not producing these errors. Rather, children's high accuracy in producing preposition plus pronoun sequences compared to other languages suggests that they may be memorizing these sequences as constructional idioms as suggested by Jackendoff (1997). These findings coincide with two theories for the use to which early frozen forms may be put, by Tomasello (2003) and Culicover and Nowak (1999). Tomasello argues that grammar only consists of constructions or frozen forms. These constructions are formed from patterns, and they make up language. As a child is developing language, they learn more and more constructions and they make sentences simply by putting together individual constructions once they learn them.

On the other hand, Culicover (1999, 2003) argues that early use of frozen forms may be the first step on the road to adult combinatorial syntax. He states that children learn constructions, but that they do not just form sentences out of individual constructions. Instead, they build on what they have previously learned to make larger combinations. From our data, it appears that children may either treat word sequences as a construction that is a pathway into the adult syntax system, as argued by Culicover, or they may treat word sequences as just a simple construction as argued by Tomasello.

Chapter 6: References

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Chapter 7: List of Tables

Study 1: All Nouns Case Studies

Study 2: Prepositional Objects Only